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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,613	11/21/2003	Kozo Mori	ED-US020444	8197
22919	7590	06/08/2005	EXAMINER	
SHINJYU GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680			KERSHTEYN, IGOR	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,613

Applicant(s)

MORI, KOZO

Examiner

Igor Kershteyn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 04/25/2005 have been fully considered but they are not persuasive.

Claims 1-10 are pending. Claims have not been amended. The specification has been amended.

The above matters are appreciated.

In the arguments dated 04/25/2005, in page 4, lines 10-16, Applicant generally states that "Trusov does not disclose using at least 37 impeller blades, and that modifying the torque converter to have at least 37 impeller blades would destroy the teaching thereof. As seen in Table 1 of Trusov in column 8, the range of 15-36 impeller blades with the associated entrance and exit angles is provided to use one converter with engines of different power rating. Further, Applicant respectfully asserts that if the entrance and exit angles of Trusov were applied to Polzer et al., Polzer et al. would not be able to provide a turbine with 37 blades."

This statement is not agreed with because the abovementioned teachings of Trusov are not relevant to the grounds of rejections set forth in the first Office action.

The Examiner would like to point out that the reference to Polzer et al. of the turbine wheel having 37 blades was applied **first** to modify the reference to Shigemasa et al., and **secondly** Examiner applied reference to Trusov to further modify reference to Shigemasa et al. as modified by Polzer et al. to have an equal number of turbine and

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impeller blades thus providing an impeller with at least 37 blades for the reasons that are different to that Applicant referred in the Arguments (See first Office action, 103 rejections section).

Also in response to applicant's argument that cited above, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Further, in page 5, lines 3-7, Applicants states that "Further, as seen in Figure 1a of Shigemasa et al., Shigemasa et al. disclose a front cover 10a, but fail to disclose flexible plate that non-rotatably connected as recited in claim 5 of the present application. Further, neither Trusov nor Polzer et al. disclose a flexible plate. Thus, Applicant respectfully asserts that the combination of Shigemasa et al., Trusov, and Polzer et al. does not render claim 5 of the present application obvious."

This statement is not agreed with because it is an inherent feature that a torque converter is connected to an engine output shaft through a flexible plate and Shigemasa et al., even though is not showing a flexible plate, does show a provision for connecting the flexible plate to the torque converter in figure 1a as a threaded bushing welded to the front cover 10a that evidently provided on the front cover 10a for connecting the torque converter to the engine output shaft. Additionally, the evidence of inherency can be found in references of record cited in a Prior Art section of the first Office action such

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as in Patents Nos. 4,624,105, 4,866,935, 5,058,027, and 5,152,139 that clearly show a front cover non-rotatably connected to the flexible plate.

Further, in page 5, lines 8-13, Applicant states that "Moreover, Applicant respectfully asserts that the torque converters of claims 1 and 5 of the present invention have greater than expected results, which are evidence of nonobviousness. Referring to paragraphs (0028) and (0029) of the present application, it is stated that transmission efficiency becomes insufficient when the flatness ratio is less than 0.8. However, the torque converters of claims 1 and 5 of the present application exhibit allowable values when the ratios are less than 0.8, and even when the ratios is less than 0.7."

These arguments of counsel cannot take the place of evidence in the record (See MPEP 37 CFR 716.01 (c) II).

Further, in page 5, lines 15-16, Applicant states that "Dodge fails to disclose an impeller with a prime number of blades". This statement is not agreed with because in column 19, lines 42-45, Dodge does teach the impeller with a prime number of blades.

With regard to Applicants arguments concerning claims 3, 4, 7, and 9, the Examiner would like to point out that these arguments are not agreed with for the same reasons as those with regard of claims 1 and 5.

Lastly, regarding Applicant arguments concerning claims 8 and 9, the Examiner would like to note that there were no rejections under 35 USC 103 set forth in the first Office action as unpatentable over Arai et al. towards claims 8 and 10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 5, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai et al. (4,186,557) in view of Polzer et al. (4,391,096) in view of Trusov (3,797,243).

Arai et al., in figure 3, teach a torque converter being configured to transmit torque using a fluid comprising: a front cover 5; an impeller 6 being arranged axially opposite said front cover and forming a fluid chamber with said front cover 5, a turbine 7 being arranged in said fluid chamber to face said impeller 6; and a stator 10 being arranged between said impeller 6 and said turbine 7 to redirect flow of the fluid flowing from said turbine to said impeller 6, said impeller 6, said turbine 7, and said stator 10 constituting a torus having a flatness ratio being less than 0.8.

Arai et al. don't teach either part of the torque converter having at least thirty-seven impeller blades.

Polzer et al. in figure 1, and column 9, lines 15-17, teaches a torque converter 10, having a turbine wheel 15 having at least thirty-seven impeller blades 15a.

Since Arai et al. and Polzer et al. are analogous art because they are from the same field of endeavor, that is the torque converter art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the

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turbine wheel of Arai et al. with at least thirty-seven blades as taught by Polzer et al. for the purpose of decreasing the slip of the torque converter at higher speeds.

Arai et al. as modified by Polzer et al. teach a turbine wheel having at least thirty seven blades.

Arai et al. as modified by Polzer et al. don't teach an impeller having at least thirty-seven impeller blades.

Trusov, in column 8, lines 25-35, teaches a torque converter having a number of blades of a turbine wheel being substantially the same as a number of impeller blades.

Since Arai et al. as modified by Polzer et al. and Trusov are analogous art because they are from the same field of endeavor, that is the torque converter art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the impeller of Arai et al. as modified by Polzer et al. with the substantially the same number of impeller and turbine wheel as taught by Trusov for the purpose of improving the torque conversion coefficient.

Claims 1, 4, 5, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigemasa et al. (4,726,185) in view of Polzer et al. (4,391,096) in view of Trusov (3,797,243).

Shigemasa et al., in figures 1-3, teach a torque converter being configured to transmit torque using a fluid comprising: a front cover 10a; an impeller 10 being arranged axially opposite said front cover 10a and forming a fluid chamber with said front cover 10a, a turbine 12 being arranged in said fluid chamber to face said impeller

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10; and a stator 14 being arranged between said impeller 10 and said turbine 12 to redirect flow of the fluid flowing from said turbine 12 to said impeller 10, said impeller 10, said turbine 12, and said stator 14 constituting a torus having a flatness ratio being less than 0.8.

Shigemasa et al. don't teach either part of the torque converter having at least thirty-seven impeller blades.

Polzer et al. in figure 1, and column 9, lines 15-17, teaches a torque converter 10, having a turbine wheel 15 having at least thirty-seven impeller blades 15a.

Since Shigemasa et al. and Polzer et al. are analogous art because they are from the same field of endeavor, that is the torque converter art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the turbine wheel of Shigemasa et al. with at least thirty-seven blades as taught by Polzer et al. for the purpose of decreasing the slip of the torque converter at higher speeds.

Shigemasa et al. as modified by Polzer et al. teach a turbine wheel having at least thirty seven blades.

Shigemasa et al. as modified by Polzer et al. don't teach an impeller having at least thirty-seven impeller blades.

Trusov, in column 8, lines 25-35, teaches a torque converter having a number of blades of a turbine wheel being substantially the same as a number of impeller blades.

Since Shigemasa et al. as modified by Polzer et al. and Trusov are analogous art because they are from the same field of endeavor, that is the torque converter art, it

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would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the impeller of Shigemasa et al. as modified by Polzer et al. with the substantially the same number of impeller and turbine wheel as taught by Trusov for the purpose of improving the torque conversion coefficient.

Claims 2, 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai et al. (4,186,557) as modified by Polzer et al. (4,391,096) as modified by Trusov (3,797,243), further in view of Dodge (2,242,515).

Arai et al. as modified by Polzer et al. as modified by Trusov, teach all the claimed subject matter except that they don't teach the number of impeller blades is a prime number.

Dodge, in figures 1-28, and in column 19, lines 42-45, teaches a torque converter having an impeller with the number of impeller blades being a prime number.

Since Arai et al. as modified by Polzer et al. as modified by Trusov and Dodge are analogous art because they are from the same field of endeavor, that is the torque converter art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the impeller of Arai et al. as modified by Polzer et al. as modified by Trusov with the prime number of the impeller blades as taught by Dodge for the purpose of prime number of the impeller blades.

Claims 2, 3, and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigemasa et al. (4,726,185) as modified by Polzer et al. (4,391,096) as modified by Trusov (3,797,243) in view of Dodge (2,242,515).

Shigemasa et al. as modified by Polzer et al. as modified by Trusov teach all the claimed subject matter except that they don't teach the number of impeller blades is a prime number.

Dodge, in figures 1-28, and in column 19, lines 42-45, teaches a torque converter having an impeller with the number of impeller blades being a prime number.

Since Shigemasa et al. as modified by Polzer et al. as modified by Trusov and Dodge are analogous art because they are from the same field of endeavor, that is the torque converter art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the impeller of Shigemasa et al. as modified by Polzer et al. as modified by Trusov with the prime number of the impeller blades as taught by Dodge for the purpose of prime number of the impeller blades.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

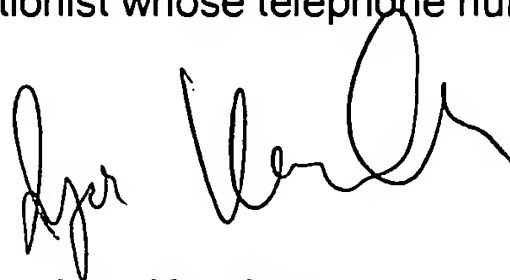
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK

June 2, 2005



Igor Kershteyn
Patent examiner.
Art Unit 3745



EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

6/4/05